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THESIS

**CAN THE INDIAN NAVY RESPOND TO A
GROWING CHINESE FLEET?**

by

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December, 1995

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**CAN THE INDIAN NAVY RESPOND TO
A GROWING CHINESE FLEET?**

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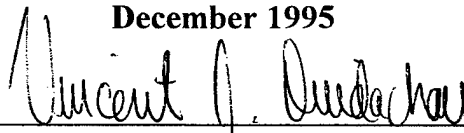
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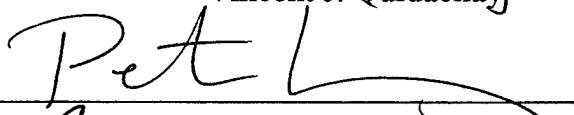
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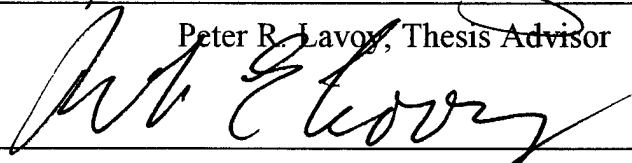


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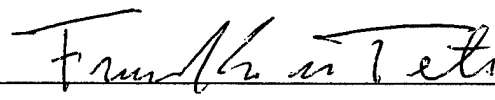
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ABSTRACT

The purpose of this thesis is to determine whether the Indian Navy can respond to a growing Chinese fleet by analyzing the historical development of the Indian Navy since independence. Three naval expansion periods are identified, and three causal factors are measured to determine the effects of each factor on Indian naval expansion. The three factors are (1) responses to a perceived threat, (2) India's economic condition, and (3) the benefits of foreign military aid. The study shows that responses to an increase in perceived threat initially drove each expansion period, but a key factor in sustaining any period of development was the benefit of foreign military aid. The economy played a minor role in India's early history, but has become a primary factor for future fleet expansion. The conclusion of this thesis is that the Indian Navy will only expand if all three factors exist. Currently India perceives threats from China and Pakistan, and India is experiencing relative economic success. The factor that is not present - the one which will inhibit significant naval expansion - is the benefit of foreign military aid. Without a substitute arms supplier taking the place of the Soviet Union, the Indian Navy is not likely to expand in the near future.

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EXECUTIVE SUMMARY

China and India experienced the largest periods of naval expansion in the history of their navies during the middle to late 1980s. With the end of the Cold War and a decreased operational tempo of the superpower navies in the Indian Ocean region, China is emerging as the leading naval power in the arena. Will India's navy respond to a growing Chinese fleet by expanding its own navy? Can India respond to China's growing fleet?

In this thesis, I analyze what the Indian Navy's force structure could resemble in the next twenty years, in response to India's perceived threats and India's history of naval development. In examining the history of Indian naval development, I describe Indian grand strategy, Indian military strategy, and Indian naval missions. In discussing India's military strategy, it will be emphasized that the Navy is considered a low priority service in relation to the army and air force.

I separate India's naval development into three phases: Expansion Period I - 1964-1969, Expansion Period II - 1975-1977, and Expansion Period III - 1985-1989. These periods are selected for three reasons. After analyzing *Jane's Fighting Ships* from 1947 to 1994, these are periods in which the number of ships in India's inventory had a dramatic increase in force size, number of ships, or significant increase in capability. For example, a significant increase in force size would be the acquisition of conventional submarines doubling the previous compliment, or acquiring an aircraft carrier or nuclear submarine. Also these periods of naval expansion correspond directly to several leading analyses of Indian naval development. Finally, these periods correspond to specific increases in India's defense expenditures as a percentage of GDP.

After establishing these three periods of naval expansion, I correlate the direct effects of three factors on Indian naval development during each of these developmental periods. Specifically, I test three hypotheses:

1. *Hypothesis number one: The Threat Hypothesis* - If there is an increase in perceived threat, then there is an increase in naval force structure. This is based on the security dilemma and more specifically Stephen Walt's "balance of threat" theory as described in *The Origins of Alliances*.

2. *Hypothesis number two: The Economic Hypothesis* - If there is an increase in Gross Domestic Product (GDP), then there will be an increase in naval force structure. This hypothesis is based on economists Michael D. Ward and A. K. Mahajan's "Defense Expenditures, Security Threats, and Government Deficits: A Case Study of India, 1952-1979," and International Monetary Fund economist Daniel Hewitt's "Military Expenditures Worldwide: Determinants and Trends, 1972-1988." The previously mentioned economists postulate that as a country's GDP increases, the military spending as a percentage of GDP also increases. This thesis will examine that theory in reverse by checking for a correlation between the GDP and the military expenditures as a percentage of GDP since 1947.

3. *Hypothesis number three: The Foreign Military Aid Hypothesis* - If India receives a high amount of foreign military aid, then there is an increase in naval force structure. This is also based on Walt's balance of threat theory in that the advantages gained in terms of foreign aid, specifically military aid, will allow a country to spend more on defense.

The dependent variable is naval acquisitions (or changes in force structure) and defense expenditure as a percentage of GDP. The three independent variables are: 1) perceived threats, 2) economic performance, and 3) level of foreign military aid as a result of an alliance with Soviet Union.

The data indicates that India's reaction to perceived threat was the initial factor in all three naval expansion periods, combined with the foreign military aid package provided by the Soviet Union. Although economic factors were not influential in the first two expansion periods, economic factors were important in the third expansion period, which was the largest of the three periods in terms of defense expenditures and acquisitions. Therefore, it is concluded that a combination of response to perceived threat, some form of significant foreign military aid and a stable economy is necessary for India to experience a fourth naval expansion period similar to the magnitude of the first three periods.

India responded to increases in threat according to Walt's balance of threat theory. Throughout India's history, a perceived threat from Pakistan or China existed prior to a naval expansion period. The threat was either in the form of direct conflicts or wars, or perceived capabilities and unclear intentions. By reviewing India's confrontational history with Pakistan and China, adequate threat was consistently present to warrant an Indian military build-up. As the threat increased significantly, the Indian Navy expanded significantly in accordance with Walt's balance of threat theory.

Hewitt's and Ward's economic theory that countries will expand their military capabilities as their economies grow was valid during one of the three Indian naval expansion periods. Although the first two periods did not correlate to an economically successful period for the Indian economy, it is important to note that India still managed to increase its defense budget. Since the third expansion period was the largest period in terms of defense expenditures and acquisitions, it appears that economic factors are becoming more important as military weapons and ship platforms become more expensive. Economic factors will play an important role in a fourth Indian naval expansion period.

Walt's foreign military aid theory is particularly enlightening in India's case. The favorable terms between the Soviets and the Indians were the most important factor in

allowing India to expand its Navy. In compliance with the foreign military aid theory, the Soviets looked to increase their leverage over India to counter U.S. leverage over Pakistan. By the favorable terms with India, the Soviet Union felt India would be a potential ally in South Asia. The Indians were smart to take advantage of the Soviet military link and consequently built a strong naval component, consisting primarily of Soviet-bought platforms and technology. However, the collapse of the Soviet Union significantly affected the capabilities of the Indian Navy which is now finding it difficult to locate spare parts and equipment to maintain its primarily Soviet-bought fleet. Nevertheless, the military aid package that the Soviets provided was perhaps the most important factor that helped drive Indian naval expansion.

India's economic success has become very important. Perceived threat is almost taken for granted due to a combination of India's aspirations to be the dominant regional power and a tradition of rivalry between India and Pakistan, and between India and China. The key factor will be India's ability to transform their economic success into purchasing power by seeking favorable military options from new markets in Europe and in the CIS. All three hypotheses will contribute to India expanding its navy for a fourth time. First of all, by understanding that China and Pakistan are still threats, Indian naval planners will lobby for an increase in naval force structure. Secondly, with continued economic success, India can pay for the latest ship types and modern weaponry with hard currency. Finally, by actively seeking favorable contract terms with other countries, India can purchase these new ship platforms at a reasonable price to the Indian government and the supplying countries.

This thesis concludes that India will not soon experience a fourth naval expansion due to the lack of foreign military aid. The only factor of the three tested in this thesis that is not present today is the foreign military aid package. As a result, the Indian Navy is in troubled waters, and will continue to struggle into the turn of the century. The basis

for this argument is the fact that the strongest factor in the history of Indian naval development was the favorable terms contracts that the Soviets shared with India. Without those terms, the Indian Navy would not have experienced the significant increases in naval force structure. An example of the effect of the Soviet military link is that currently seventy per cent of the Indian Navy consists of Soviet-built equipment. The Soviet military link began in the early 1960s just prior to the first naval expansion period and continued strong until the end of the third naval expansion period. When combined with perceived threat and economic success, the Soviet military link enabled India to purchase major ship platforms and technology pushing them into the category of a strong middle sized fleet.

Without some form of military aid or favorable terms, the Indian Navy will not expand. If the Indian Navy is to increase in force size and force structure in the next twenty years, India must alter its foreign policy and establish better relations with the United States and China in order to capitalize on the best military technology that these two countries can offer. However, it is very likely that both countries will require India to make certain concessions resembling a stronger alliance and interdependence than perhaps India is willing to make. It seems that currently India does not have an answer to the problem of their military arms supplier dilemma.

I. INTRODUCTION

With the fastest growing economy in the world, China is rapidly acquiring the economic means to build and support a first-rate navy.¹

China and India experienced the largest periods of naval expansion in the history of their navies during the middle to late 1980s. With the end of the Cold War and a decreased operational tempo of the superpower navies in the Indian Ocean region, will India's navy respond to a growing Chinese fleet, by expanding its navy? Can India respond to China's growing fleet?

In this thesis, I analyze what the Indian Navy's force structure could resemble in the next twenty years, in response to India's perceived threats and India's history of naval development. India's naval development will be divided into three separate expansion periods based on significant increases in defense expenditures as a proportion of Gross Domestic Product (GDP), and significant increases in ship types both qualitatively and quantitatively. Expansion Period I - 1964-1969, Expansion Period II - 1975-1977, and Period III - 1985-1989 all correspond to phases in India's history when defense expenditures and ship acquisitions significantly increased. I argue that India's naval development was primarily threat-

driven in response to wars with Pakistan and China and the prospect of external power intervention, particularly as prompted by the presence of the USS Enterprise in the Bay of Bengal. I show that in addition to perceived threats, an overriding factor in Indian naval development was India's ability to procure equipment from the Soviet Union and some western countries through India's policy of non-alignment.

I examine the effects of India's economy and India's foreign policy in relation to the Soviet Union as they affect naval development. Through examining India's economy and non-alignment policy, this thesis explains how the economy had no real affect on Indian naval development. I also correlate the benefits of India's foreign policy during the Cold War with all of the three phases of India's naval development.

This thesis consists of six chapters. Chapter I contains a brief introduction with an explanation of the relevance of understanding Indian naval development and American foreign policy. The last portion of chapter I explains the methodology used to conduct the research.

Chapter II briefly explains Indian strategic thinking and how it affects Indian naval development and other branches of the Indian armed forces. Chapter III tests each hypotheses by comparing the data from different sources. After establishing the three different naval expansion periods, each hypothesis will be tested to see if there is

any correlation between the hypothesis and the expansion period.

Chapter IV summarizes the findings of the data in chapter III to determine exactly which hypothesis had a stronger impact on naval development. Chapter V applies the findings in chapter IV to the condition of the hypotheses in the 1990s. The condition of the hypotheses in the 1990s applied to the history of what has driven Indian naval development will imply whether the Indian Navy will expand in the next twenty years.

Chapter VI is a conclusion, where I contend that there will not be a fourth naval expansion based on the results from this research. In other words, not all the factors that successfully drove Indian naval expansion in the past are present in the 1990s, and will not likely change in the next twenty years.

A. RELEVANCE OF INDIAN NAVAL DEVELOPMENT

Before examining India's history of naval development, it is important to understand the relevance of a Chinese-Indian naval arms race and the implications for U.S. foreign policy with respect to both countries.

As stated in 1995 by the Clinton Administration in its *National Security Strategy of Engagement and Enlargement*:

The United States has engaged India and Pakistan in seeking agreement on steps to cap, reduce, and ultimately eliminate their weapons of mass

destruction and ballistic missile capabilities. Regional stability and improved bilateral ties are also important for America's economic interest in a region that contains a quarter of the world's population and one of its most important emerging markets.²

Understanding the history of Indian naval development is important to the United States because it directly affects U.S. foreign policy in the region. The value of a stronger Indian Navy could be important as the United States looks to Asian countries to assume greater responsibilities within their regions. The first concern will be the security and stability of the region, particularly the Indian Ocean. Currently the United States regularly patrols the Indian Ocean as part of its deterrence mission. The increase in both size and activity of the Indian Navy could propose new problems for the U.S. Navy.

Another concern is India's proximity to the Persian Gulf. If another Persian Gulf War occurs an expanding Indian Navy could assist the United States in patrolling of the Gulf waters, as did the French, Canadian and Australian Navies. Another major concern for the United States would be the possibility of an arms race between India and China. Currently with normalization talks existing between the United States and China, any military assistance the United States might provide to India could upset both U.S.-China relations as well as U.S.-India relations. "The location of

India sitting astride important sea lanes and focal points, gives her a strategically advantageous position."³

Economically, the Indian Ocean is characterized by several important features. About 65 per cent of the world's proven oil resources lie in the Gulf region. The oil-rich region and the sea lanes which criss cross the Arabian Sea and the Indian Ocean are very important to the developed and developing countries alike. The Indian Ocean is one of the major trade routes of the world. The ocean bed has vast amounts of valuable minerals, which attract the attention not only of the United States, but also of other Western developed countries. Of vital interest to the western world and Japan are minerals such as gold, chromium, coal, iron ore, bauxite, copper, uranium, antimony and diamonds. Of equal economic importance is the existence of huge consumer markets in the region.⁴

In order to safeguard these vital sea lanes, India relies heavily on a coastal defense navy. India's naval missions range from protecting the coastline to ensuring safe passage through the Indian Ocean. As with most coastal navies, the Indian Navy is responsible for protecting its Economic Exclusive Zone (EEZ). In order to complete all of its missions, the Indian Navy has evolved through certain naval development stages which are explained in Ashley Tellis' "Securing the Barrack."⁵

With vital interests in the Persian Gulf, it would be beneficial for the United States to continue to develop its foreign policy with regard to India and perhaps a more developed Indian Navy. With a history of regional conflicts between Indian and Pakistan, and later India and China, combined with the growing aspirations for a blue water fleet by the Chinese, American policy makers should be concerned with the possibility of a Chinese-Indian naval arms race.

B. METHODOLOGY

In analyzing the history of Indian naval development, I begin by explaining Indian grand strategy, Indian military strategy, and Indian naval missions. In discussing India's military strategy, it will be emphasized that the Navy is considered a low priority service in relation to the army and air force.

I then separate India's naval development into three distinct phases: Expansion Period I - 1964-1969, Expansion Period II - 1975-1977, and Expansion Period III - 1985-1989. The reasoning for selecting these periods is based on three factors. After analyzing *Jane's Fighting Ships* from 1947 to 1994, these are periods in which the number of ships in India's inventory had a dramatic increase in force size, number of ships, or significant increase in capability. For example, a significant increase in force size would be the

acquisition of conventional submarines doubling the previous compliment, or acquiring an aircraft carrier or nuclear submarine. Also these periods of naval expansion correspond directly to Tellis' analysis of Indian naval development as well as to Amit Gupta's explanation of India's military force structure and military doctrine.⁶ And finally, these periods correspond to specific increases in India's defense expenditures as a percentage of GDP.

After establishing these three periods of naval expansion, I attempt to correlate the direct effects of three factors on Indian naval development during each of these developmental periods. I test three hypotheses:

1. *Hypothesis number one: The Threat Hypothesis* - If there is an increase in perceived threat, then there is an increase in naval force structure. This is based on the security dilemma and more specifically Stephen M. Walt's balance of threat theory as described in *The Origins of Alliances*.⁷

2. *Hypothesis number two: The Economic Hypothesis* - If there is an increase in Gross Domestic Product (GDP). then there is an increase in naval force structure. This hypothesis is based on economists Michael D. Ward and A. K. Mahajan's "Defense Expenditures, Security Threats, and Government Deficits: A Case Study of India, 1952-1979,"

and International Monetary Fund economist Daniel Hewitt's "Military Expenditures Worldwide: Determinants and Trends, 1972-1988."⁸ The previously mentioned economists postulate that as a country's GDP increases, the military spending as a percentage of GDP also increases. This thesis will examine that theory in reverse by checking for a correlation between the GDP and the military expenditures as a percentage of GDP since 1947.⁹

3. *Hypothesis number three: The Foreign Military Aid Hypothesis* - If India receives a high amount of foreign military aid, then there is an increase in naval force structure. This is also based on Walt's balance of threat theory in that the advantages gained in terms of foreign aid, specifically military aid, will allow a country to spend more on defense.¹⁰

The dependent variable is naval acquisitions or changes in force structure, and defense expenditure as a percentage of GDP. The three independent variables will therefore be: 1) Perceived threats, 2) Economic performance, and 3) Level of foreign military aid as a result of an alliance with Soviet Union.

1. *The Threat Hypothesis:*

Description: This hypothesis is based on India's confrontational history with Pakistan and China. Using past wars or conflicts as indicators, I determine if India's naval expansion was threat-driven or had other origins. This is accomplished by correlating the year of actual conflicts with a corresponding period of actual expansion. Also contributing to this hypothesis is official statements from the Indian Navy that describes naval expansion occurring as a result of recent wars with either Pakistan or China.

Since India never had a formal alignment with the Soviet Union, it would be improper to address India's actions as aligning with the Communist Bloc countries. India did have a formal agreement with the Soviet Union known as the Treaty of Peace, Friendship and Cooperation which called for joint consultations in the event of substantial military threat to either party. In that regard, India did have a formal alliance with the Soviet Union. Walt's theory is also applicable in the sense of his description of states' behavior in chapter eight of his book when he states, "I identified several popular hypotheses that are often used to explain how states choose their friends."¹¹

Based on Walt's balance of threat theory, the balance of power school did not sufficiently explain the behavior of

states that were not directly affected by the two superpowers either by geography or historical alliances. In fact, there never was a "balance" during the alliances, because in both World Wars, the alliances were disproportional. The balance of power theory does not explain the unpopularity of the Warsaw Pact, and does not explain the preferences and actions of lesser states. India and Pakistan fit into this description because as Walt states, countries respond to the balance of threat situation based solely on the threat posed by its immediate neighbors. The lesser states do not affect the balance between superpowers as much as they affect the balance of regional powers and the ability to counter any one particularly dominant regional power. The actions of the superpowers will not alter or shape the actions of the third world because the balance of threat is not disturbed. Walt states that the difference between balance of power and balance of threat is that the balance of threat theory incorporates the other factors that create threats to national sovereignty, which is very important to all peripheral countries.¹²

As Walt explains, in the balance of threat scenario, states act in order to protect themselves determined by the threats they perceive - power of others is merely an important element in their calculations; therefore power of others can be a liability or an asset depending on capability, location and employment. One central issue is

how states respond to threats. As Walt explains, "states ally to balance against threats rather than power alone; level of threat affected by geographic proximity, offensive capabilities, and perceived intentions."¹³

Also contributing to the threat argument is Ward and Mahajan's study which concludes that based on India's economic history and military expenditures, a country will spend more based on perceived threats from its neighbors. India is no exception, and as Ward and Mahajan suggest, is a perfect example.¹⁴

2. The Economic Hypothesis:

Description: The threat hypothesis examines the effect of economic development on the naval expansion periods. To test this hypothesis, I will compare GDP growth percentages to the expansion periods to determine if the GDP increased or decreased. Basically, if GDP increased during the same years as naval expansion occurred, it could be argued that the economic situation had a direct effect on naval expansion. In conjunction with that argument, if GDP decreased during the periods that there was no naval expansion, then the economic situation also affected naval expansion in a negative way. Or, as I argue, it could be that the economic situation had no real effect on naval expansion. In other words, there were increases and

decreases during the same expansion periods that had no relevance on defense expenditures.

Hewitt's examination of military expenditures and trends concluded that "military expenditures are found to rise with GDP. For low-income countries, as GDP rises military expenditures rise somewhat more quickly." Hewitt also concluded that a prosperous economy is beneficial for the military in that the military expenditures is directly related to economic growth.¹⁵ It is important to note that in general, the theory is correct. For example, the countries known as the East Asian Newly Industrialized Countries (NIC's) comprised of Singapore, South Korea, Taiwan and Thailand, all have acted in conjunction with this theory. Each one of the aforementioned countries has increased military spending and began to construct formidable militaries as a result of unprecedented economic growth. As a result, other Asian countries such as Indonesia and Malaysia are predicted to increase military forces in conjunction with their predicted economic growth.

This thesis examines India in reverse order as opposed to the theory of Ward and Hewitt. By examining the history of naval development, I show that during the first two naval expansion periods, India's economic growth was irrelevant to its military growth. In other words, India has been able to increase its military spending regardless of GDP growth

because the percentage of military expenditures has been relatively small since independence.

3. *The Foreign Military Aid Hypothesis:*

Description: Hypothesis number three will be based on India's ability to acquire weapons and platforms, especially submarines, by successfully manipulating its foreign policy while maintaining what Indian leaders called their "non-alignment" policy. This hypothesis is closely related to another of Walt's hypotheses that states that there will be certain alliances or relations formed simply due to the availability of military weapons or other forms of military aid. As Walt states, the provision of military assistance can create an effective alliance, because it communicates favorable intentions, because it evokes a sense of gratitude, or because the recipient becomes dependent on the donor.¹⁶ Therefore, the hypothesis in India's case is that the stronger relations that India projects to support with the Soviet Union will result in more military aid that India will receive from the Soviets. In contrast, the Soviets established this relationship in order to keep influence in the region, countering the influence the United States had over Pakistan. The problem that may result in both cases of India and Pakistan is the ability of the superpowers to monopolize the supply of the important asset, which in

effect would create an over-dependence on military hardware from one supplier.

The foreign military aid hypothesis is of particular importance in India's phase III of naval development; a time when there is no actual threat to India's national security. This hypothesis will also address the fact that mere availability of weapons and ships from the former Soviet Union had a greater affect on naval expansion than any other factor.

Walt summarizes the hypothesis on foreign aid as: 1) more aid implies more likely to form an alliance, 2) the greater the external threat faced by the recipient, in this case Pakistan and China, then the greater the effect of aid on alignment, 3) the greater the donor's monopoly of the commodity, the greater the leverage over the recipient, 4) the greater the dependence favoring the donor, then the greater the leverage over the recipient, and 5) the greater asymetry of the donor, then the greater the leverage over the recipient.¹⁷

An important factor to consider with hypothesis number three is Walt's caveat that the weaker the domestic political decision-making apparatus of the recipient, the less leverage the donor can exert on the recipient. India's domestic decision-making process made it difficult for the Soviets to formally align with the Indians because the

Soviets could not gain effective leverage by only supplying military hardware.

After comparing the effects of each hypotheses, a conclusion is formed as to the likelihood of a fourth Indian naval expansion period. The conclusion is based on how each factor affected Indian naval development in the past, and the condition of those same factors in the 1990s.

II. INDIAN STRATEGIC THINKING

The experience of the British raj provided India with a geopolitical frame of reference that continues to influence present-day Indian strategy. As the British built and nurtured their empire in India, they also evolved a strategy for India's defense. On land and sea, the British sought to deny other powers easy access to the subcontinent. They set buffer states to secure the land periphery and help defend the core; sea control ensured that all other powers were denied the means to penetrate Indian waters or to challenge any strategic sea routes.¹⁸

This chapter discusses India's strategic thinking and the belief of Indian policy makers that India should be the dominant force in South Asia. It is India's grand strategy that forces India to maintain a certain level of military dominance over its neighbors, especially Pakistan.

A. INDIAN GRAND STRATEGY

The Indian security strategy is described as a series of concentric circles or rings called a mandala. The first circle is India itself. The second circle encompasses India's smallest contiguous neighbors: Sri Lanka, Nepal, Bangladesh, and the Maldives. The third circle includes Pakistan, China, and the Soviet Union. And the final circle includes the more distant great powers and the rest of the world.¹⁹

The mandala concept of a grand strategy existed prior to India's independence, and has been carried through by

India's following Prime Ministers. India's most pressing strategic concern is its own internal unity. India's history is marked by brief periods of unity and splendor with much longer periods of conflict and disunity. Most of the problems arise from different ethnic, linguistic, regional and communal factors, one or more of which have negatively affected India after each brief period of unity. A majority of the internal unity is highlighted by the diversities in the border zones of outer India, including Kashmir. Although Kashmir will not be discussed specifically in this paper, it suffices to say that the conflicts as a result of the Kashmir dispute have driven an ethnic wedge between many groups in the interior portions of India as well as in the border territories in the north, northeast and northwest.

The second circle of the mandala consists of India's small neighbors which comprise small points of vulnerability. Although none of these countries poses a serious threat to India, excluding of course, Pakistan, India sees these neighbors as threatening in other ways. Examples are Sri Lanka's problems with the Tamils, ethnic and immigration problems with the Bengalis in Bangladesh, and also tribal problems in northeast India often involving Burma. All of the previous problems listed are dangerous to India for several reasons that are not very obvious to countries outside of the South Asian region. For instance,

some of the problems in these outer areas involve ethnic and communal problems similar to those of India, and some Indians fear the chance of spillover into India which would present certain internal security problems within India. Another problem is that some of these countries have solicited support and aid from powers outside the region so as to balance India's preponderance of power.

Therefore, in response to these possible threats, India has established itself as a regional hegemon by ensuring that India will not allow a bordering state to involve itself in any foreign affairs action or defense policy issue that India considers potentially dangerous or threatening to Indian security. In addition, India will not allow foreign governments to establish a presence, military or otherwise or exert any form of influence in a neighboring state that India views as unfriendly.²⁰

The third circle involved Pakistan, China and the former Soviet Union. Pakistan is India's primary threat due to the Kashmir dispute, religious differences, geographic proximity and three past wars. Similarly, China is listed as a threat to India because of its proximity and due to the Sino-Indian Conflict in October of 1962. On the other hand, the former Soviet Union was originally viewed as a threat because of its ability to influence China and the rest of India's neighbors simply because of its super power status and capabilities.

The fourth circle consists primarily of western powers. This defense against invading super powers originated from India's overall perception of defending against colonialism as experienced during British rule. It is because of India's past that Jawarhal Nehru initially sought for a foreign policy of non-alignment. Therefore, the defense for the fourth concentric ring is primarily an ideological and political defense rather than a military defense.

B. INDIA'S MILITARY STRATEGY

India's military strategy is primarily threat-based deriving from past conflicts with Pakistan and China that both took place by land. It is due to these conflicts that India has concentrated the majority of its national defense to prevent any vulnerability from future land attacks either from their neighbors or other powers such as the former Soviet Union did against Afghanistan.

Immediately after partition, India prioritized its armed forces in the order of Army, Air Force and then the Navy. It was envisioned by Indian military planners that the Army must stop the invasion of India's neighbors, and that the Air Force would supplement the Army's defense with tactical air support. The Navy would attempt to deny sea lanes and minimally support the overall military strategy by performing functions such as blockades. The first clear

expansion of the armed forces occurred in 1964 when India embarked on a five-year plan to build up its defense. India's first priority was the creation of a 825,000-man Army and the modernization of its weapons and equipment. The second step was the stabilization of the Air Force at forty-five squadrons, its re-equipment with modern aircraft, and the provision of suitable ancillary facilities. Because the Navy was considered the least important of the three forces, it simply maintain itself at the present strength, replacing obsolete vessels with new foreign ships.

However, it was at this time that the Navy began to modernize itself by replacing its ships with better, more equipped ships from foreign navies. India's overall military strategy was reflected by a press release stating that ...the Army is would to constitute the primary and most significant force in terms of size and budget. The Army would remain the bastion of defense until 1970 or 1975, by which time it is predicted that the Air Force will have developed its own production base.²¹

C. INDIA'S NAVAL MISSIONS

As reflected in India's overall military strategy, and as described by Tellis, the Indian Navy has always maintained a strictly defensive role, which it inherited from the British as a result of partition. At partition, the Royal Indian Navy was divided between India and Pakistan

in the rough proportion of two to one. Although Indian naval tradition dates back to 2500-1500 B.C., its official beginnings as a maritime power in the region started after partition. Initial naval requirements were simple at first, however, India reportedly desired a "preponderance of naval power" vis-a-vis her Asiatic neighbors to guarantee that, although India strongly and truly denies any aggressive policy or intentions, where India was concerned, she would have a reasonable assurance of freedom of the seas through the Arabian Sea, Indian Ocean and Bay of Bengal for her own maritime interests²²

In order to achieve this "preponderance of naval power," the Nehru administration sought to secure and maintain naval superiority over neighboring nations. The end result was that India believed it needed "...a navy possessing the nucleus of a striking force, as well as escort vessels and local flotillas to safeguard base areas."²³

India then began to construct a Navy capable of meeting limited missions of coastal defense, and later, in the 1980's announced its aspirations to build a blue water navy complete with aircraft carriers. What has evolved over the past fifty years is a Navy that is comparable to the definition proposed by Commodore P. J. Cowling of the Royal British Navy, when he describes his own British fleet:

The Royal Navy looks upon itself as a medium sized maritime force...At the lower end of the "medium" spectrum is a nation which can deploy and support a squadron of frigate sized vessels and has some conventional submarines: such a nation can run a limited sea denial control campaign, but can only be really effective within the framework of an alliance. At the top end is a navy which has the potential, if required, to act independently at sea and is capable to project its sea power to affect matters on land.²⁴

The Indian Navy is somewhere between the low end and the high end of the medium sized Navy spectrum. And with its current force structure, India has its basic naval missions that support the nation's overall military strategy:

- 1) Coastal defense
- 2) Protection of sea lines of communication
- 3) Deterrence
- 4) Sea control
- 5) Naval presence
- 6) Power projection
- 7) Monitoring big power navies²⁵

India's grand strategy has ensured that the Indian Navy will always have a strong role in protecting India's national interests. As a smaller portion of the Indian armed forces, the Indian Navy provides the necessary elements to give the Indian armed forces a total military package. A historical problem for India is transforming a good grand strategy into specific military capabilities in support of its grand strategy. India has clear national

interests that originate from protecting its EEZ and the Indian Ocean region. Indian policy makers are too vague when attempting to make its military capabilities meet its national security objectives. The remainder of this thesis describes the role of the Indian Navy in attempting to support Indian national security objectives.

III. TESTING THE HYPOTHESES

This chapter tests each of the three competing hypotheses by examining whether the data supports the assumption of the hypotheses. The first portion establishes the criteria for dividing India's naval development into three expansion periods. The second portion presents each hypothesis and measures them against the expansion periods for correlation. If a particular hypothesis can explain why the Indian Navy expanded, then it will be concluded that the hypothesis is a strong indicator of what drives Indian naval development.

A. ESTABLISHING THREE NAVAL EXPANSION PERIODS

From the establishment of the Indian Navy at partition to what is now a medium sized fleet, the evolution of India's naval development successfully progressed from a Navy with simple maritime interests to that of a Navy considered by many to be the regional sea power in South Asia. Using Tellis' three models of naval development, I will establish that there were three distinct beginnings of naval expansion periods as mentioned in the introduction of this paper: 1964, 1975 and 1985. Initially these periods will directly correspond to India's reaction to perceived threats and the immediate naval expansion as a result of those threats. Tellis' models are as follows:

Model I - coastal defense; Model II - fleets specializing in two or three discrete operational tasks such as coalition participants, regional control, and ability to exert extra-regional penetration; and Model III - a fleet fully blue-water capable.

India's Navy experienced minor periods of expansion prior to 1964. Model I of Tellis is defined as "...low capability fleets possessing only local coastal defense capabilities."²⁶ It was in the 1950s and early 1960s when India began acquiring British vessels to help in their coastal defense mission, replacing the earlier mission of constabulary roles. The limitations on India's Navy were due to the Navy's relative unimportance in relation to the other military forces in India, and because of these limitations, a coastal defense policy was all that could be supported.

The Indian Navy remains the smallest of the three armed forces. The Navy: Air Force: Army personnel ratio for India is in the order of 1:2:22, and the naval portion of the Indian defense budget has only recently crossed the 10 per cent mark, slowly increasing back to a respectable level of 12 per cent in 1984-85.²⁷

Initially, the development of India's post-independence naval forces were the result of concerns by British naval planners whose primary concern was protecting the export routes of the colonial textile industry. As Lorne J. Kavic,

author of *India's Quest for Security*, states the Admiralty aspired to attain a Navy comprised of a force of escort vessels and local flotillas of minesweepers, and the extension of base repair facilities that could support India's forces in support of an internal, defensive naval force. As early as 1947, Vice Admiral W. E. Parry of the Indian Naval Headquarters proposed the Indianization of the Navy consisting of two light fleet aircraft carriers, three light cruisers, eight to nine destroyers, and the necessary support vessels.²⁸ This Indianization was proposed with the direct mission of Phase I, coastal defense.

It is important to emphasize that the value of the aircraft carrier battle group was proven consistently in the Second World War by both U.S. allied forces and Japan. It was this success that began the trend among world naval powers to achieve a mobile, air strike capability. Therefore, India's quest for a multiple air strike force, although not completely consistent with a coastal defense policy, was in conjunction with contemporary naval world powers, and was a direct result of perceived threats.

1. Expansion Period I - 1964-1969:

Description. This first expansion period can be described in two methods: 1) number of ships or size of the fleet, and 2) defense expenditure as a percentage of GDP. Ideally, the increase in defense expenditure as a per cent

of GDP will precede an increase in ship acquisition by one to two years. Although different sources are not identical in terms of their numerical data, both the Stockholm International Peace Research Institute (SIPRI), which publishes the *SIPRI Yearbook on World Armaments and Disarmaments*, and the Arms Control Disarmament Agency (ACDA), which publishes the *World Military Expenditure and Arms Transfer*, show increases in defense expenditure for the period of 1963-1966. Prior to 1960, defense expenditure was 1.8 to 1.9 per cent of GDP. SIPRI reports that in 1963 defense expenditure rose dramatically to 3.8 per cent and continued at 3.5 per cent in 1966, before dropping to 3.0 per cent in 1969. Similarly, the ACDA figures report that there was a sharp increase in defense expenditures in 1963-64 of 4.4 per cent as compared to 2.99 per cent in 1962-63. ACDA also shows the defense expenditure percentage remaining at 4.02 per cent in 1965-66 before dropping to 3.5 per cent in 1966-67.²⁹

Jane's Fighting Ships also reflects this naval expansion period in terms of number and types of ships. The naval build up from 1947-1962 helped to accumulate a force structure consisting of one medium sized aircraft carrier, two cruisers, three destroyers, thirteen frigates, and 32 miscellaneous smaller craft, which remained constant throughout this period. Not until 1964, 1965 and 1966 did the Indian Navy truly expand by adding submarines to its

fleet, and increasing its compliment of frigates to seventeen.³⁰

2. Expansion Period II - 1975-77:

The second expansion period can also be described by defense expenditures as a percentage of GDP, and increases in naval force structure. SIPRI reports increases of defense expenditures in 1972, 1975, and 1976 of 3.5, 3.3 and 3.2 per cents respectively. Prior to this period, SIPRI data indicates that defense expenditures were averaging around 2.8-3.0 percent. ACDA figures are even more remarkable at 3.89 per cent for both 1971-72, and 1972-73 periods, and 3.72 per cent for 1975-76. ACDA also reports that defense expenditures remained relatively high through the late 1970's, ranging from 3.39 per cent in 1974-75 to 3.78 per cent in 1979-1980.³¹

The increase in naval force structure in the period from 1974-79 began with the acquisition of four more submarines which mathematically signified a 100 per cent increase in India's submarine force in one year, 1975. Throughout this period of naval expansion, India completed its force build up to total 29 frigates, eight corvettes, and 70 miscellaneous craft by the years of 1979 and 1980. Prior to 1974, the Indian Navy consisted of only 63 total ships, including the four submarines purchased in 1965. This increase in force structure was not only in pure

numerical terms, but also in capability, as India was viewed as obtaining a more balanced fleet.³²

3. Expansion Period III - 1985-1989:

The third expansion period began in 1985 and is reflected in SIPRI by increases from 3.1 per cent in 1983 to 3.2, 3.3, 3.7 and 3.9 per cent in 1984, 1985, 1986, and 1987 respectively. In the years from 1978 to 1982, defense expenditures plummeted to an average of 2.9 per cent before increasing in 1983 and 1984. Similarly, ACDA reports that defense expenditures were 3.42 per cent in 1985-86, and rose sharply in 1986-87 to 4.04 per cent. In 1987-88, it dropped to 3.59 per cent, which is still higher than the average of 3.3 per cent experienced in the early 1980's.³³

In terms of force structure, 1984 marked the beginning of the period characterized as "India's major military build-up."³⁴ The Indian Navy increased its submarine force to include construction or acquisition of seven more submarines. The Navy also acquired more miscellaneous craft, increasing its total inventory to 95 miscellaneous ships by 1988. In 1986, India purchased its second medium sized aircraft carrier, along with squadrons of Sea Harrier aircraft to equip both carriers, and Tu-142 long range maritime patrol aircraft.³⁵ And in 1987, India increased its amphibious fleet to 15 amphibious craft. By far the most powerful evidence of the naval expansion period is

India's lease agreement with the Soviet Union to acquire, on loan, a Soviet Charlie I nuclear attack submarine. By the end of the third expansion period in 1989, India's fleet consisted of sixteen submarines (including plans for constructing four more), seven destroyers, 24 frigates, six corvettes (with plans for constructing four more), 17 amphibious vessels, 93 miscellaneous craft and 40 Coast Guard ships. This expansion period was by far, the greatest period of naval expansion for the Indian Navy.³⁶

B. HYPOTHESIS NUMBER ONE: THE THREAT HYPOTHESIS

India's first mission objective was defending the coast and protecting the sea lines of communication. This initial phase of coastal defense originated from the perceived threats of Pakistan, China and any other outside power that could easily cut off a majority of India's trade and commerce routes which were conducted by the sea. The coastal defense also originated from the pre-Independence days when India was conquered by both the Portuguese and British forces by sea attacks and coastal invasions.

When accounting for perceived threats, the coastal defense policy was the most practical policy in terms of both military capabilities and budgetary considerations. As India's history since independence has shown, only two countries, Pakistan and China have threatened India. And during the wars with both Pakistan and China, the majority

of the battles were fought on land as a result of border invasions and conflicts. The Navy has never been fully utilized in any of these wars, with the exception of minor naval battles with Pakistan in the 1971 Indio-Pakistani War. In actuality, although the Navy has developed beyond Tellis' Model I, it has only been used as a Model I asset in most of its exercises. It is safe to observe that every navy must begin its naval development with the first mission of coastal defense, but the key factor is in what direction the naval development proceeds in order to become a true maritime power.

India pursued the development of a more specialized navy in response to threats to its regional interests. Because of the presence of the USS Enterprise and her battle group in the Bay of Bengal at the end of the Sino-Indian War, and the ability of other countries to influence the Indian Ocean, India made a conscious effort to formulate its version of a maritime force. This force would proceed beyond the capabilities of mere coastal defense, but not be powerful enough to claim the status of a blue water Navy such as the U. S. Navy. India's Phase II naval development commenced with the purchase of its sole aircraft carrier, INS Vikrant. The presence of the USS Enterprise in the Indian Ocean region did persuade the Indians that they had been invaded and subjected to an insulating piece of military blackmail with nuclear overtones. The incident

also helped solidify a consensus that there was a need to insulate the country against naval resurgence in both political and military terms.³⁷

The shift in India's naval strategy corresponds to Tellis' Model II of naval development characterized by the ability to meet naval demands beyond that of mere coastal defense. India reached Model II in 1971 when Tellis states, that the Indian Navy moved beyond the first model of defense of territorial and contiguous waters when the Navy looked to achieve significant tri-dimensional capabilities of impressive numbers enabling the Indian Navy to configure and support two separate commands.³⁸

According to one of the leading Indian naval planners and strategists, Rupak Chattopadhyay, the primary factors for pursuing the construction of such a Navy are economic in nature, not based on threat. He posits that "India is dependent on the sea for her economic prosperity."³⁹ Due to the absence of the undersea pipelines, India's crude oil is brought in on tankers. Policy makers in New Delhi realized the need to protect India's shipping industry and defend Indian island territories, which are both economically and strategically important. In addition, "off India's western coast lies extensive oil fields which account for roughly two thirds of India's domestic oil production."⁴⁰ However, I posit that the threat of countries such as the United States, China and Pakistan is the determining factor that

also relates to the defending of India's economic interests. Therefore it is first perceived threat that drives India's naval development, not simply economic interests as Chattopadhyay states.

As mentioned previously, the presence of the USS Enterprise in the Bay of Bengal solidified the perceived threat of a superpower confrontation that could possibly destroy the security of India's shipping and island territories. Indian naval planners such as Dr. K. Subrahmanyam summarized:

...the arrival of the American Task Force off the coast of India in 1971 has never been forgotten by Indian defence planners and subsequent defensive measures have been based around 'raising the cost of superpower intervention in the region.'⁴¹

Therefore, in order to solve India's perceived threat problems, India's maritime safety lies in maintaining a powerful, well balanced, specialized fleet. And due to Prime Minister Nehru's initial policy of non-alignment, and the country's insistence on not choosing an alliance since the policy of Nehru, "India has no superpower to guarantee her protection...India must be prepared to look after herself."⁴²

A portion of the threat that drove India to pursue a blue water Navy was India's shortcomings in relation to submarine warfare and cruise missile technology. Countries around India were purchasing more advanced technology, and

receiving much more assistance from the other powers, forcing India to look toward modernizing her fleet. While other countries were taking advantage of new technology, India continued to lag behind, and eventually stumbled into a more reactive form of naval policy and doctrine. According to Admiral Govil of the Indian Navy, "no Navy builds its infrastructure and force levels on the basis of current threats due to the very long lead time needed to build up sea power."⁴³ Therefore, India must assess her future potential threats, of which he states they are Pakistan, China and Iran. With that in mind, India began to construct a blue water fleet.

Also a perceived threat, which by India's naval policy makers makes it a valid threat, is the Chinese Navy. It is worth reiterating that India has only fought wars with two countries, Pakistan and China. The Chinese Navy is rapidly increasing its naval strength. In the recent period the naval wing of the People's Liberation Army-Navy (PLAN) is the fastest growing of the three services, which is the opposite situation in India. Through large frigates, destroyers, submarines and support ships the Chinese are adding to their blue water capability, and enhancing their power projection forces.⁴⁴

Although many critics claim that China is only building its Navy in conjunction with its economic progress as a means to ensure coastal defense, India must look toward any

Chinese naval buildup as a direct threat to India's maritime security because of China's proximity and India's vulnerability to a coastal attack.

The PLAN also has a formidable amphibious force with a well trained naval infantry. In contrast, India's naval infantry is non-existent due to its inability to deploy and act independently from the Army infantry support.

China also has an extensive defense cooperation program with Pakistan and a ring of client states around India to which China sells arms - Saudi Arabia, Iran, Iraq, Nepal, Bangladesh, Sri Lanka and Myanmar. These client states could provide the Chinese with necessary refueling posts or port visits during a time of war. Myanmar is the main client of China that poses potential harm to India China has involved itself deeply in Myanmar's affairs by China's financial assistance of \$2 billion in the last two or three years, half of which has been in the form of military supplies.⁴⁵

With China's improved PLAN forces of land-based medium-range bombers and a fleet of over ninety attack submarines, it can potentially project its powerful arsenal into the Indian Ocean. Also of concern to India's naval planners are the PLAN's aspirations to acquire a carrier force that "would gradually break away from the West Pacific Ocean and enter oceans around the world," and eventually "assume the

mantle of a major global sea power."⁴⁶ This doctrine directly threatens any potential claim that India had as the regional sea power of influence in South Asia.

Chinese maritime forces consist of modern principal combatants, particularly destroyers and frigates, armed with advanced western technology with a new surface-to-air missile launcher, improved electronic support and fire control systems.

The closest posed naval threats to India are reports of Chinese assistance in the construction of naval facilities in Myanmar, and the modernization of existing naval facilities at Akyab and Great Coco Islands. These actions indicate to Indian naval planners that China may interject further into the region and threaten India's national maritime interests.⁴⁷

India and China are also disputing over the Line of Actual Control, which is the imaginary line separating the two countries in the northeast corner of India. Similarly, India and Pakistan are still at a stalemate concerning border disputes over the Kashmir region. Since neither one of these two conflicts looks to be resolved in the near future, it is fair for naval policy makers, who need to justify building a bigger fleet, to classify both Pakistan and China as legitimate and immediate threats to maritime security. Therefore, based on perceived threats, it is only logical that India would want to construct a blue water Navy

capable of containing both countries by Naval shore bombardment, able to project its sea power ashore, and equipped with the potential to successfully blockade both countries thus eliminating their sea lines of communication. In Tellis' words, the Indian Navy should, "undertake unhampered offensive sea control operations, and be credited with truly hemispheric projection capabilities."⁴⁸

C. HYPOTHESIS NUMBER TWO: THE ECONOMIC HYPOTHESIS

Some explanatory power in understanding Indian naval development may exist with economic factors, therefore it is necessary to examine India's economic situation for the same three periods in order to measure the plausibility of an economic hypothesis. That is to say, did naval expansion occur as a direct result of economic growth?

The first expansion period was from 1964-69. Prior to the first period, "during the 1950's and early 1960's, the growth of the Indian economy through emphasis on investment goods was substantial. The growth rate of 3.5 per cent per year seemed ineluctable."⁴⁹ According to the proposed economic hypothesis, one would expect that the 1950's and early 1960's would therefore correlate to a naval expansion period. On the contrary, India's Navy showed relatively little development during this period. If the hypothesis is

true, then in the period of 1964-69, there should be a relative increase in GDP growth. But,

In the mid 1960's, however, India's security situation vis-a-vis China and Pakistan became somewhat tenuous. Foreign assistance to India concurrently leveled off. Additionally a drought in both 1966 and 1967 significantly affected agricultural production and reduced national GDP.⁵⁰

The second naval expansion period was from 1975-1977. According to the World Development Report (WDR) and the International Monetary Fund (IMF), India's economy was relatively the same during the 1970's as it was during the 1960's. The WDR lists India's annual percentage rates of GDP at 3.8, 3.6 and 3.6 per cent for the 1950's, 1960's and 1970's respectively. The IMF similarly lists their average percentage rates at 3.6, 4.0 and 3.3 per cents for those same years. Therefore, for the second naval expansion period, the average annual percentage rate of GDP was between 3.3 to 3.6 per cent as reported by both sources.⁵¹

The third naval expansion period was from 1985-89. The economic factor hypothesis has more plausibility during this period. The WDR reports an increase in GDP growth in 1980-85 to 5.2 per cent, up from 3.6 per cent in the 1970's. The IMF shows a stronger increase from 3.3 per cent to 6.9 per cent during the same periods. A third source, the World

Bank confirms the growth performance for the entire 1981-1990 period at 5.5 per cent.⁵²

However, although there was some economic growth during the third expansion period, and none during the first two periods, Michael D. Ward, an economist and defense expenditure analyst comments:

India's defense spending has not really grown much faster than GNP, but has fluctuated between 2 and 3.5 per cent of GNP. Thus, it may well be that India has managed to remain below the constraints that would hamper economic growth.⁵³

Therefore, it may be conversely true in India's case that India's economic growth, and in some cases lack of growth, has had no direct affect on India's defense spending. In other words, India's navy manages to acquire necessary equipment and material with its allotted share of GDP.

D. HYPOTHESIS NUMBER THREE: THE FOREIGN MILITARY AID HYPOTHESIS

While threats are a necessary component in explaining Indian weapons acquisition and doctrinal changes, they do not provide sufficient explanation for it.⁵⁴

In measuring the effects of India's receiving foreign military aid on the three naval expansion periods, it is first necessary to describe India's foreign policy. From partition, Jawaharlal Nehru established that India would

pursue a non-alignment policy. Throughout the U.S.-Soviet Cold War, (which will be referred to as the Cold War), all India's Prime Ministers followed Nehru's adherence to the non-alignment policy, albeit manipulating it to fit the current situation. India's non-alignment policy was not initially an aggressive approach to non-alignment, and it was not based on ideology. Nehru pursued non-alignment as an international strategy, hoping to avoid Indian entrapment in great-power rivalries and to enable India to focus on internal development. As a result, India's non-alignment policy was neither pro-active nor reactive. India simply desired to withdraw from the constraints of a bi-polar world in order to construct more internal unity and solve domestic economic and political problems that existed as a result of partition.

However, India's passive approach to non-alignment turned to a more aggressive non-alignment posture with increases in threats from both Pakistan and China, and India's realization of the benefits of being the "fulcrum point of South Asian politics."⁵⁵

Nehru believed that a policy of non-alignment would not only keep India out of the emerging East-West conflict, but also ensure its security from superpower intervention. But India's leaders also acknowledged that in order to remain non-aligned they would have to develop an indigenous military capability to withstand external pressures.⁵⁶

The first expansion period in 1964-69 was, as previously stated, in response to external threats. The 1962 Sino-Indian War brought about a sea change in Indian defense planning because India now faced a two-front threat that could only be met by raising force levels.⁵⁷ However, despite the new threat environment, the Indian Navy was forced to expand in response to the threat, but with minimal funding. Therefore, what factor assisted in shaping the naval force structure in response to these external threats of Pakistan and China? As Gupta states:

Its [the Indian Navy's] expansion in the 1960's was made possible by the opening up of the military relationship with the Soviet Union, which transferred submarines, frigates, and missile boats to the Navy. In fact, what eventually shaped the military expansion program then was the unavailability of resources and the military link with the Soviet Union.⁵⁸

The military link was also expanded after 1965 war with Pakistan, providing weapons for all three branches of armed services. Another reason for acquiring Soviet weapons was the favorable terms offered by the Soviets. Weapons were paid for in Indian rupees rather than scarce hard currency, with a seven year grace period before payments began and a total repayment period of seventeen years, at an interest rate of only 2.5 per cent.⁵⁹ Therefore, in response to perceived threats from China and Pakistan in the early 1960's, India expanded its navy with direct, solicited

assistance from the Soviet Union. By manipulating its foreign policy of non-alignment, India was able to make a military link with the Soviets without making any ideological or political shifts toward alignment.

The second expansion period, 1975-77 was marked by an increase in submarines in 1975 and 1976, as previously stated. The Indian Navy acquired four Foxtrot Class submarines from the Soviets, doubling their submarine force. Although other submarines were available, India was only seeking the Soviet-made submarines. The reasons for India's purchases remained the same: favorable terms and inexpensive availability. In addition, the Indians were able to purchase these submarines and still maintain its position of non-alignment.

The third expansion period, 1985-89, was highlighted by three different changes in naval force structure: 1) additional conventional submarines, 2) a second aircraft carrier, and 3) a Soviet nuclear attack submarine. The key for this increase in force structure was once again India's ability to remain non-aligned. In comparison, Pakistan was forced to purchase primarily western equipment, at a much higher cost than the Soviet equipment. The additional submarines that India purchased were West German Type 209 submarines, which were commissioned in 1986. It was the first time India had acquired submarines from a country other than the Soviet Union. In addition, India furthered

its non-alignment policy by purchasing a second aircraft carrier from Great Britain in 1986, and commissioning it in the Indian Navy in 1987. India now had conventional submarines from both West Germany and the Soviet Union, and a second aircraft carrier from the British. In keeping with its policy of non-alignment, India also purchased, on loan, a nuclear attack submarine from the Soviets in 1989. The lease of a nuclear submarine to the Indians marked the first time India was able to acquire a nuclear powered vessel.

Throughout the three naval expansion periods, India was able to manipulate its foreign policy. And throughout the Cold War, India had built a formidable fleet, perhaps the strongest in the South Asian region. However, it is important to note that all of this military build-up occurred with India maintaining its claim of non-alignment. By manipulating its position with the Soviet Union, in response to the U.S.-Pakistani relationship, India was able to acquire weapons with no formal allegiance to any superpower. In contrast, Pakistan was forced to support U.S. actions in the region and invest all its assets to U.S. interests.

The ending of the Cold War was both beneficial and detrimental for India. First of all, through non-alignment, India was able to claim that it neither lost nor gained through the demise of the Soviet Union. Overall national strategy concepts remained important due to the proximity of

the Persian Gulf. India still had to defend its borders with China and Pakistan, and still had to maintain control over its EEZ. The detrimental effects of the Cold War ending were severely felt by the military as stated:

India found its world turned further upside-down with the demise of the Cold War. Its \$10 billion arms agreement with the USSR, which enabled it to repay loans at a concessionary interest rate of 2.5 per cent in Indian rupees and in India products, was valid until 1997, but ended as the Soviet regime vanished.⁶⁰

Perhaps India's non-alignment policy was beneficial in that during the transition period of the ending of the Cold War, India would have benefitted by attempting to lean more toward the United States. By constructing a navy based primarily on Soviet parts, the Indians placed itself, and in particular, its military in an obsolete state of readiness. India's Navy has suffered great losses with the end of the Cold War.

The Indian Navy is currently in troubled waters. Ships purchased from the Soviets in the 1960's, 1970's and even the 1980's are already obsolete. The biggest problem is with purchasing spare parts for the existing fleet. After the Cold war ended, India is discovering that all of the fleet is ageing. Ships that were very useful when first purchased by the Soviets, are now not seaworthy. Although ships are on a periodic refit, and maintenance cycle, the

drydocking period last well beyond the planned departure date. Ships as well as ship repair facilities are finding it increasingly more difficult to obtain parts since the end of the Cold War.⁶¹ Where will the Indian Navy look for parts? Is the Indian Navy paying the price for India's policy of non-alignment, a policy that allowed the Indian fleet to be too dependent on Soviet parts and technology.

IV. SUMMARY OF FINDINGS

This chapter presents a summary of findings comparing each hypothesis for plausibility to explain what drove Indian naval expansion since 1947. In review, the three hypotheses are the threat hypothesis, the economic hypothesis and the foreign military aid hypothesis. The findings indicate that with perceived threat initially starting the naval expansion, foreign military aid became the primary factor that drove expansion in all three periods. Furthermore, the findings suggest that the economy only affected the third naval expansion period, but it had such a strong influence that India's economy must be considered in the future.

Before evaluating the findings, a brief explanation of threat is necessary. I divide the term threat into two different definitions similar to the definitions used by Walt. Both immediate and perceived threat are analyzed for to establishing that in India's case, both forms of threat contributed to all three of the naval expansion periods. Immediate threat, as defined by Walt, is threat based on a past conflict, war or invasion, or in other terms an action that was inflicted on one country by another. In India's case, wars with Pakistan would be in the immediate threat category. The perceptual threat is more intangible, and is defined as a threat perceived by one country of another

country where there is no direct action or conflict between the two. An example of this form of threat would be if a neighboring country, such as Pakistan or China, were building up its military inventory, and India perceived the military build-up as threatening to India's national security. The problem in defining perceived threat is in interpreting the intentions of a country that is building up its capabilities. It is important to understand that if one country can turn a perceived threat into a reason for building its own military inventory, then the perceived threat is also a valid threat.

A. THE FIRST NAVAL EXPANSION PERIOD: 1964-1969

1. The Threat Hypothesis

Throughout all three naval expansion periods there was both immediate and perceived. In the case of China as a threat driving Indian naval expansion, China can be labeled an objective threat initially, but more as a perceived threat during the second and third naval expansion periods. The first and only actual conflict between China and India occurred in the Sino-Indian Border War of 1962 when China attacked India due to what China saw as an Indian intrusion into Chinese territory. India contested that the border with China was based on maps drawn by the British. The conflict arose because China refused to recognize that the border drawn by the British was legitimate. Similar to the

Kashmir disputes, the Sino-Indian Border War was fought for both power and the desires of the countries involved to flex their muscles in support of territorial integrity. It has been officially stated that "the Sino-Indian Border War of 1962 was India's greatest humiliation since independence."⁶² The Sino-Indian Border War of 1962 was the key factor that drove the first naval expansion period.

China is considered a threat for three reasons, with the first of these three reasons being the initial factor that not only drove the first naval expansion period, but also contributed to the other two reasons China is perceived as a threat: 1) China poses an immediate threat simply due to the 4000 kilometer China-India border, 2) China poses an indirect threat because of Beijing's military support for India's neighbors, especially Pakistan, and 3) China's capabilities threaten India's hegemony and ability to control the region.⁶³

Perhaps the most important threat to India is the ability of China to contest India's regional hegemony. As stated previously, the Sino-Indian Border War was the key factor in India's first naval expansion because it was an immediate threat, but it is in the perceptual sense that China has continued to threaten India in the second and third naval expansion periods. China's conventional power, military capabilities and its first explosion of an atomic bomb in 1964, combined with border tensions and differing

ideologies pose a perceptual threat to India. Some historians, including Asian expert, Professor Claude Buss, argue that China does not threaten India, especially in a maritime fashion.⁶⁴ However, because of China's military capabilities, geography, and questionable intentions, India has historically considered China a threat, and continues to consider China a maritime threat as stated by the Indian naval doctrine papers.⁶⁵

In the case of Pakistan, I argue that the definition of immediate threat was evident in the first two naval expansion periods, and perceived threat was evident since partition and continues to be a factor. Because Pakistan remains a constant threat to India in terms of border conflicts and India's grand strategy, it is correct to say that India will always be able to label Pakistan as an objective and perceptual threat, at least until the Kashmir dispute is resolved.

India and Pakistan throughout their history of conflict have amassed fairly strong militaries simply to balance their own regional threats. The United States and the Soviet Union intervened in South Asia during the Cold War, upsetting the regional balance of power, which ultimately affected the immediate regional threat. As Walt defines, the further away geographically a country is from the actual struggle for balance of power, the stronger the effects are of the balance of threat theory. Countries, such as India

and Pakistan, whose immediate security interests were not directly related to the global balance of power struggle were more concerned with the immediate regional threats to their own national security.

Another indication of immediate threat that affected India's first naval expansion period was the Second Kashmir War which took place in 1965 between India and Pakistan. Although the Second Kashmir War did not formally start until August 5, 1965, tensions resulting from the First Kashmir War and unresolved issues between the two countries, assist in making the escalation prior to the 1965 war as a contributing factor in increasing India's military inventory. Immediately after the end of the Second Kashmir War, India's military expenditures increased, as described previously in chapter three when defining the first naval expansion period from 1964-1969. Combined with the effects of the Sino-Indian Border War of 1962, the Second Kashmir War helped to jumpstart India's decision to expand its naval forces.

2. The Economic Hypothesis

The economic hypothesis predicts that during each naval expansion period, there would be a corresponding period of sustained economic growth. In measurable terms, hypothesis number two indicated that GDP growth would have a noticeable increase corresponding to a similar increase in defense

expenditures and naval acquisitions of each naval expansion period.

During expansion period number one, 1964-1969, the data in chapter three revealed that GDP growth decreased to 3.6 percent when compared to the GDP growth percentage of 3.8 percent from 1950-1960. As noted in the data presented in chapter three, there was a severe drought in 1966 and 1967, indicating that India should not have been able to acquire more expensive naval weapons systems during this period. With agriculture as the strength to India's economy, it is sensible that a severe drought would damage agricultural production, and therefore reduce national GDP. As the data suggests, the drought did reduce national GDP during this time period.

It is important to highlight that in contrast to the droughts of 1966 and 1967, India experienced strong economic development prior to the first naval expansion period during the 1950s and early 1960s. During the period prior to the first naval expansion period, since India's GDP growth rate was higher at 3.8 percent compared to 3.6 percent, it was expected by hypothesis number two that there would have been a corresponding naval expansion period during that time. Instead, the opposite results were discovered. As the economy grew, naval expansion decreased, and as the economy declined, naval expansion increased. Therefore, it is

concluded that hypothesis number two does not explain the first naval expansion period.

3. The Foreign Military Aid Hypothesis

The foreign military aid hypothesis proposes that as a country receives foreign military aid resulting from an alliance, its navy will increase quantitatively and qualitatively. In other words, a country's navy will benefit from an inexpensive availability of weapons due to foreign military aid provided by a country within one's alliance. States will act, or align with a stronger power in order to receive certain military benefits as a result of that alliance.

The foreign military aid hypothesis applies perfectly to the first naval expansion period because of India's special agreement with the Soviet Union regarding arms purchases, which began in the early 1960s. As Amit Gupta states, it was the military link established with the Soviets that enabled India to increase all three portions of its military. Not only the Navy, but the Indian Army and Air Force expanded as a result of the Soviet military link. As Walt states, much of the military build-up could be in direct response to a neighboring threat, but the fact that the Soviets were willing to sell arms to India for rupees under a seventeen year payback plan supports the foreign aid hypothesis more. In other words, the presence of an

immediate or perceived threat can initially drive the desire to expand military forces, but in India's case, the special military assistance provided by the Soviet Union was a key factor enabling India to actually purchase the military hardware.

India needed to balance itself against threats from China and Pakistan. The Soviet Union understood the value of India as an ally in countering the U.S. influence over Pakistan in the region. Therefore, the threat hypothesis explains India's situation. But, how does India increase its military strength if the United States is supplying military aid to neighboring Pakistan. The foreign military aid hypothesis seems to fit India's situation because India could receive foreign military assistance simply as a bi-product of its informal alliance with the Soviet Union.

B. THE SECOND NAVAL EXPANSION PERIOD: 1975-1977

1. The Threat Hypothesis

Because of China's unspecified intentions, isolationism and historical mistrust between India and China, especially during the 1970s, India still maintained that China was a threat. Underlying the entire concept of China as a threat, once again were China's capabilities. With an enormous population to draw from, China's civil-military relations and China's unclear intentions, India perceived a stronger China that could possibly exert its influence in the Indian

Ocean region. In contrast to China's strengths, India has weaknesses in the previously mentioned areas. India's military is relatively small. India's military, in contrast to China has very little ability to influence India's economic policies nor control the future of the military.

The Bangladesh War in December of 1971 could be viewed as an immediate threat for two reasons. The first reason is that it re-enforced the fact that Pakistan would constantly be a menacing and difficult problem simply because of geographical proximity and historical differences. Secondly, it was during this time that the USS Enterprise made its presence felt in the Bay of Bengal. This one incident by the United States has forever proven to the Indians that their mandala concept is extremely vulnerable by means of an invasion from the sea. Both actions combine to explain that the second naval expansion period from 1975-1977 could have been a result of increased perceived threats from Pakistan and the threat of a superpower from outside the region. In other words, the threat hypothesis has some validity in explaining the second naval expansion period just as it could explain the first naval expansion period.

2. The Economic Hypothesis

The economic hypothesis suggests that during the second naval expansion period, from 1975-1977, there would be an increase in GDP growth that corresponded to the 1975-1977

time frame. Although there was differing data from the two sources used in chapter three, both sources reveal basically the same conclusion with respect to hypothesis number two. The World Development Report (WDR) indicated that the GDP growth remained the same during the second naval expansion period as it was during the first naval expansion period (3.6 per cent). Although GDP growth did not decrease, hypothesis number two required that there would be a noticeable increase in GDP growth.

The International Monetary Fund (IMF), on the other hand, showed a noticeable difference in GDP growth between the period prior to the second naval expansion period and during the second naval expansion period. Instead of a significant increase from the first period to the next period, there was a sharp decrease in GDP growth from 4.0 percent in the late 1960s and early 1970s to 3.3 percent in the late 1970s. Therefore, it would seem that hypothesis number two does not fully explain the second naval expansion period either. So far, it would seem that the Indian Navy successfully expanded its force structure regardless of the national economic situation. The Indian Navy was able to acquire more sophisticated, expensive weapons platforms with minimal funding from the entire national defense budget.

3. The Foreign Military Aid Hypothesis

The West recognized an informal alignment existed between the Soviet Union and India in terms of the 1971 Treaty of Peace, Friendship, and Cooperation which was renewed for an additional twenty years in 1991. The terms of the treaty stipulated that neither state could execute undertakings inimical to the other's defense needs and called for joint consultations in the event of substantial military threat to either party. The result was a supplier-recipient arrangement in which seventy percent of New Dehli's arms imports came from the Soviet Union, lending plausibility to the foreign military assistance hypothesis.⁶⁶

C. THE THIRD NAVAL EXPANSION PERIOD: 1985-1989

1. *The Threat Hypothesis*

Pakistan continued to be a perceived threat in the 1980s because there was still no clear resolution between India and Pakistan concerning the Kashmir dispute. That combined with the mistrust between the two countries, make it clear that the bitter Indian-Pakistani rivalry will exist at least for the next twenty years.

In discussing China's civil-military relations, it is important to once again highlight the relative differences between China and India because the differences continued to affect India's perception of China as a threat in the 1980s.

China's military received a large percentage of government expenditures, and China's military was directly involved in China's modernization and industrialization of the economy.⁶⁷ Another factor is China's economic potential and value to the United States in terms of possible markets. China's economy is the fastest growing economy in the world, creating a potential market including millions of consumers for U.S. businessmen and investors.

Because of China's economic and military potential, it is conceivable that India continued to perceive China as a threat to India's mandala during the 1980s. In order to protect India's interests in controlling the region, India expanded its military forces accordingly.

By reviewing all three of the naval expansion period, it could be interpreted that India has only acquired weapons systems that adequately balanced the capabilities of India's rivals. Although some may argue that India drove Pakistan's military build-up, not vice versa, it is important to state that India did not increase its inventory exponentially compared to Pakistan and China. As immediate and perceptual threats increased from Pakistan and China threatened India with conflicts and naval build-ups, India countered by attempting to acquire more sophisticated weapons. Examples of this are India's acquisitions of conventional submarines and conventional aircraft carriers vice nuclear platforms during the first two naval expansion periods. Also

supporting the threat hypothesis is India's continuing construction of smaller crafts, frigates and corvettes, implying coastal defense, instead of building battleships or cruisers similar to the U.S. Aegis class cruisers.

India perhaps only purchased what India could afford, but in doing so, constructed a fleet that was only marginally superior to both Pakistan and in some terms China during the three naval expansion periods. Although it was threat, immediate and perceived, that initially drove India's naval expansion, it was not enough to push India to develop a dominant superpower navy like that of the U.S., Soviets, or even the British. In re-enforcing what Amit Gupta stated, although perceived threat is a strong factor in driving Indian naval development, it is not the only factor. Gupta argues that the key factor was the Soviet military link.⁶⁸

2. The Economic Hypothesis

The economic hypothesis has much more strength during the third naval expansion period, which is from 1985-1989. As indicated by the data in chapter three, this was the only naval expansion period that corresponded directly to increases in GDP growth. In fact, all three economic sources, the IMF, World Bank, and WDR reported significant increases in GDP growth compared to the two decades prior to the early 1980s. The IMF in particular showed the GDP

growth more than doubling during the third naval expansion period.⁶⁹

As the economic hypothesis proposed, as GDP growth increases, the naval acquisitions will also increase. Expansion period number three proves that the economic hypothesis is valid in explaining the third expansion period, unlike the first two expansion periods. Adding to this hypothesis is the fact that during this period India showed sustained economic growth by maintaining GDP growth at a relatively constant high rate. Correspondingly, the third naval expansion period was the largest naval expansion period in terms of both defense expenditures as a percentage of GDP and number of specific, modern platforms purchased. Therefore, although the economic hypothesis does not apply to the first two naval expansion periods, it could be applied to the third naval expansion period as the key factor in driving naval acquisitions.

3. The Foreign Military Aid Hypothesis

The first two naval expansion periods indicate that the Soviet Union directly affected Indian naval expansion because the increase in qualitative platforms that India purchased during these two periods were from the Soviets. The third naval expansion period, however consisted of German-built submarines as well as Soviet ships and the nuclear powered Charlie Class submarine. But the ability of

India to purchase German submarines could also be seen as a result of the favorable terms between the Soviets and the Indians. In other words, since India was able to purchase modern platforms from the Soviets at a cheap price, and India's GDP was increasing, India was now open to purchase more expensive platforms from Germany. Having a growing sustained economy in this case contributed to India's purchasing power.

For the third naval expansion period, the threat hypothesis could be the factor that initially drove the desire to increase Indian naval forces. The economic hypothesis, provided Indian defense planners with the money and purchasing power India needed to purchase modern, sophisticated weapons. The foreign military aid hypothesis proved to be a constant driving factor that enabled the Indian Navy to expand for a third time. In summary, all three hypotheses have applicability during each of the different naval expansion periods, and it is a combination of these three factors or hypotheses that will enable India to expand a fourth time.

V. APPLICATIONS FOR A FOURTH NAVAL EXPANSION PERIOD

Now that it has been established that all three factors have played a role in driving Indian naval expansion, this chapter examines the condition of these three factors in the 1990s. By examining the factors in the first half of this decade, it will be easier to ascertain whether the Indian Navy will expand a fourth time, thus creating a response or competition with the Chinese Navy. This chapter examines the current level of immediate and perceived threat to India the condition of the Indian economy during the first half of the 1990s, and the most significant factor that will inhibit India's naval development, the absence of the Soviet military link. The condition of these factors will answer the question of this thesis, can the Indian Navy respond to a growing Chinese fleet?

A. THE THREAT HYPOTHESIS IN THE 1990s

New Delhi considers Islamabad to be its most immediate threat, while Beijing constitutes its principal strategic threat. India's armed forces, among the most capable in the third world, have been configured (in terms of arms inventories and force deployments) to counter the perceived danger emanating from these states.⁷⁰

This section will examine the plausibility of Pakistan and China as a threat to India's grand strategy in the 1990s

and beyond. Although the Brasstacks Incident in 1986-1987 could be considered an objective threat by India because both Indian and Pakistani forces were prepared to battle out what would be the fourth conflict between the two countries, there never really was an actual confrontation. Therefore, the mere threat of Pakistani forces being able to respond quickly to engage Indian forces on the Indo-Pakistani border, constitutes a valid perceptual threat for India. Contributing to the concept of Pakistan as a threat is still the historical conflict between the two countries as a result of the ongoing Kashmir dispute. Consequently, Indian defense planners will likely consider Pakistan as a threat for the foreseeable future.

Pakistan has increased its naval strength significantly from 1991-1993 while India's force levels have declined. Pakistan has the advantage with its Atlantique aircraft with Exocet missiles, and potentially with its future acquisition of Orion aircraft with Harpoon missiles from the United States. Also dangerous are Pakistan's submarine and clandestine forces. "Pakistan therefore poses the main threat to our maritime interests."⁷¹

Pakistan also poses a serious threat because of its bloody confrontational past over the Kashmir border dispute. Part of Pakistan's overall military strategy consists of naval sea to shore bombardment of Delhi and Bombay via its major Navy base in Karachi. The ability of Pakistan's Navy,

especially its submarine force, to effectively damage India's major cities poses the quickest and most obvious threat to India's Navy.

The added ASW threat of Pakistan comes with the addition or future acquisition of the Agosta 90B submarine from France. The Agosta 90B submarine will include the fitting of the submarine-launched SM 39 Exocet missiles with better torpedo discharge and reloading system. The Agosta also has an integrated sonar system (active/passive bow search, passive ranging, passive intercept towed passive search and underwater telephone), all of which is a given aboard American made submarines. The most important feature of the Agosta 90B is the Air Independent Propulsion (AIP) system, which is a non-nuclear auxiliary system extending the submerged endurance of a submarine. The AIP system increases the period between required battery recharges, when a submarine is most vulnerable due to sound emanation and snorkel visibility.⁷² The added technological advantage in ASW has reassured the Indian naval planners that Pakistan was and remains a vital naval threat to India's maritime interests.

China, on the other hand, is a little more difficult to comprehend as an objective threat to India because India and China have not had an actual conflict since the Sino-Indian Border War of 1962. But for Indian defense planners, and

specifically naval planners, China remains a threat for at least four reasons.

First of all, China has the third largest Navy in the world, and has formally announced its desire to purchase a catapult launching aircraft carrier to enhance its blue water capabilities as part of its Project 2000. The purchase of an aircraft carrier combined with the Chinese Navy's underway replenishment capabilities, and its cruise missile launching technology, give the Chinese Navy the ability to project power ashore from waters within India's mandala. Contrary to Asian specialists Professor Claude Buss, it is not totally inconceivable that China would strike India. China's current military capabilities and unclear intentions in the region are sufficient enough to list China as a major threat to Indian national security.

Also contributing to China's naval strength is its indigenous ship building infrastructure. China's fleet currently consists of one ballistic missile submarine (with plans to build another one), six fleet and cruise missile submarines, 38 patrol submarines (with 40 more listed in reserve status), eighteen destroyers, 37 frigates over 400 fast attack crafts (with 280 more in reserve), 62 minesweepers, 161 types of amphibious ships and landing craft, and other miscellaneous craft. Of this inventory of naval ships, almost all of the craft are built in China. India, on the other hand, during the 1980s became one of the

world's principal arms importers, and relies heavily on foreign bought modern naval platforms, and indigenously only constructs smaller surface combatants such as lightweight cruisers and destroyers.⁷³

A second factor contributing to China as a threat is the China's presence in the Indian Ocean region with its access to the naval base in Myanmar and the Chinese Navy's ability to reach the Indian Ocean with their recent success at refueling a ship underway. Also contributing to China's unwanted influence in the region is China's selling of arms to India's neighboring countries especially Pakistan. By selling arms to India's neighbors, China has severely hampered India's comfortable control over India's smaller neighbors that India has historically enjoyed. In contrast, India has no forward bases outside of the Indian Ocean. Also India does not make deployments outside of its waters that would aid in establishing a foreign port of call routine similar to that of the United States. In other words, China has better relations with India's neighbors than India.

A third reason China remains a threat to India is due to the ability of China's military to influence domestic policy decisions. The Chinese military controls a certain portion of the country's economy, and actually runs part of the industrial sector. Defense decisions are made by the military, and later supported by the government. China has

a historical link between the military and the government. In India's case, there was no National Security Council until 1990. There is no equivalent to the Chairman of the Joint Chiefs of Staff. De facto control of the armed forces rests with the prime minister and his cabinet, none of which are in the military. Therefore, the views of the prime minister on defense questions often prove decisive.⁷⁴

A fourth element of the idea of China as a threat to India is China's recent economic success. With China listed as the fastest growing economy in the world, they are able to channel this new economic success directly into an already formidable Chinese military. As both economists Hewitt and Ward suggest with their economic theory, as a country's economy grows, its defense grows correspondingly. In the case of China their suggestion is correct. Chinese government officials have clearly stated that with their economic success, China will increase its military strength and become a major player in world affairs. India, still considered by some as a third world country, does not have an economy equal to that of China, and for the immediate future, will not achieve as powerful an economy as the Chinese. Therefore, the Indians will be forced to forge a military on the limited resources that the economy generates.

B. THE ECONOMIC HYPOTHESIS IN THE 1990s

It was observed by this study that India's economic situation did not affect Indian naval expansion during the first two expansion periods. But, because India's economy was a factor in the third naval expansion period, which was the largest expansion period of the three, it is important to address the Indian economy in the 1990s. The economy is also important because the naval platforms, especially the most modern and sophisticated platforms, are increasingly more expensive. Therefore, if India desires to purchase equipment like nuclear submarines, catapult launching aircraft carriers and AIP submarines, Indian naval planners will rely heavily on India's economic success in the present and future.

India experienced periods of economic success during the 1980s, but during 1991 India's economy suffered greatly:

The Indian economy has been marked by double digit inflation, two devaluations of the rupee, limited foreign exchange holdings (e.g., in April 1991 reserves diminished to the value equivalent of two weeks' imports), and substantial budget and trade deficits.⁷⁵

The weakend economy initially led to decreases in defense expenditure and a reduced disbursement of monies in real terms. For example, the 1991-1992 defense budget was a six billion rupee increase in the defense budget, it translated

to an actual decrease of six per cent because of inflation.⁷⁶

According to the IMF, India's GDP plummeted after the third naval expansion period when in 1991, it hit a low of 0.9 per cent after being well above 5.5 per cent and even 9 per cent previously from 1985-1990. In 1992, the economy somewhat responded with an increase in GDP to 4.0 percent.⁷⁷

In September 1991, then Indian Defense Minister Sharad Pawar declared that financial constraints had impaired the operational readiness of India's armed forces. He emphasized that the defense budget's limited foreign exchange component would not permit the import of necessary spares for weapons systems and equipment. Pawar's concerns were likely aggravated by IMF fiscal guidelines precluding any significant redistribution of monetary resources to the defense services in the near to mid term. What this economic crisis translates to is the interruption of several naval construction and acquisition programs. Thus, the Indian government has deferred plans to build a 30,000 ton aircraft carrier based on a French design. Indeed, no capital ships will likely join the Indian Navy's inventory until 1995. Budgetary restrictions are hindering the Indian Navy's ability to enhance force projection capabilities. The biggest problem posed by India's inability to sustain economic growth is that it questions India's ability to carry an economic burden of large offensive operations

executed at considerable distances from the subcontinent. India's economic woes may force the Indian Navy to remain a coastal navy vice a medium sized, power projection fleet.⁷⁸

India responded to the 1991 crisis by correcting distortions in the economy and reducing pervasive state intervention. The initial impetus came from a severe balance of payments crisis in 1990-1991. The crisis impelled the Indian authorities to adopt an adjustment program that contained both immediate stabilization measures and ambitious structural reforms. Despite some policy deviations, the stabilization effort proved sufficient to restore external confidence and foreign exchange reserves. Although growth slowed initially, the economy now appears to be responding vigorously to the reforms. Beginning in 1993, capital inflows surged, combining with the demand stimulus, buoyant export growth and a growing investment response to the reform program. All of this helped generate a broadly based economic recovery. GDP growth rebounded to 4.5 percent annually in 1992 and 1993, and in 1994 reached 5.5 percent, just three years after the economic reforms were implemented. The projected GDP growth for 1995 was also 5.5 percent.⁷⁹

What this translates to is an overall increase in GDP growth similar to that of the third naval expansion period during the mid to late 1980s. Meanwhile, defense expenditures as a percentage of GDP have remained constant

at approximately 4.1 percent. If hypothesis number two is correct, then there should be a significant increase in naval acquisitions by the Indian Navy. However, there have been no significant qualitative increases in India's naval force structure. In fact, the Charlie I class nuclear submarine was returned to the Soviet Union because the lease expired. It could be argued that the Indian Navy has decreased in naval capability because of the ageing ships, including their two aircraft carriers and their eight Soviet Foxtrot submarines, all of which were used by Tellis, Gupta, and this author to characterize the expansion of the Indian Navy.

If the third naval expansion period from 1984-1989 and the 1992-1995 period have similar characteristics of GDP growth increases, then what could be the difference that has not enabled the Indian Navy to expand a fourth time. Here is where the third hypothesis of foreign military aid has had its biggest consequences.

C. THE FOREIGN MILITARY AID HYPOTHESIS IN THE 1990s

As previously stated, over seventy percent of India's naval inventory was Russian built. As a consequence of the demise of the Soviet Union, India is among the hardest hit of all countries in terms of foreign arms imported from the Soviet Union. Not only were the hulls and weaponry Soviet

built, but the spare parts market was primarily supplied by the Soviet Union as well.

To add to India's plight in 1991 was the demand by the former Soviet Union that some financial commitments be paid in hard currency. The Indians were also stricken with new terms regarding arms purchases including a withdrawal of the low interest, soft currency loans. During this period, the defense budget was already decreasing, so the Soviet pressure greatly reduced the attractiveness of Soviet weaponry. What also contributed to India's reduction in military growth was a confusion in Russia as to who controlled the fulfillment of contractual obligations and an overall decrease in production in Soviet factories because of a transition problem between the previously military run factories to civilian led factories. The interruption of arms shipments from the Soviet Union lessened the operational readiness of both the Indian Navy and Air Force because both forces are more dependent on the import of high technology items.

However, despite these difficulties with the former Soviet Union, former Defense Minister Pawar declared in early 1992 that military ties with Russia and other members of the Commonwealth of Independent States (CIS) will remain strong. He further stated that there will be no change in the Soviet-based technology used by the armed forces. Nevertheless, India has identified several East European

countries possessing large inventories of Warsaw Pact weapons as alternative arms suppliers.

Now that the absence of a reliable weapons supplier has been identified, what options are available to the Indian Navy? In other words, perceived threat still exists from Pakistan and China that is sufficient to initiate a naval expansion period. The economy is beginning a strong comeback that could sustain a strong fourth naval expansion period. With the absence of the Soviet Union as a steady arms supplier, where can the Indians look to form relations that could produce favorable terms so that Indian can expand its naval forces once again?

The remainder of this chapter discusses possible alternatives for the Indian Navy concerning alliances, normalization of relations and perhaps expanding the existing CIS arms market.

Four options I will briefly explore are: 1) strengthening U.S.-Indian relations, 2) strengthening Sino-Indian relations, 3) maintaining a policy of non-alignment, or rebuilding the arms market with the former Soviet Union. These options will be examined in order to establish which option would more likely create a reliable weapons market similar to the one enjoyed by the Indians during the past forty-eight years with the Soviets.

The Indian Navy needs to establish better relations with other countries in order to acquire better naval

weapons and ship platforms as a result of an ageing fleet consisting primarily of obsolete Russian spare parts. The number one naval power in the world is the United States, therefore, it would be beneficial for the Indian government to seek better relations with the United States and establish a naval arms import market. India has declared that they desire certain ship types from the United States, but because of India's non-alignment policy, and specifically because of the military link between India and Russia, equipment was not sold to India by the United States. Strengthening U.S.-Indian relations would benefit both the Indian Navy and the American Navy, if India were to develop into a reliable, and capable naval force that could support U.S. interests in the Indian Ocean and the Persian Gulf.

The strengthening of Sino-Indian relations is also an option, albeit a difficult one. If India and China were to continue to normalize relations, the Indian Navy would definitely benefit because China is among the world's largest exporters of military equipment. Perhaps a normalization of relations could trigger weapons technology transfers between China and India that would help to modernize both their fleets. With China's advanced technology in building submarines, India could learn the necessary shipbuilding infrastructure that India so desperately needs. China's military and specifically the

PLAN has more to offer India than India has to offer the PLAN, but a mutual defense organization or an agreement to share both the Indian Ocean and the South China Sea could prove to economically significant.

The third option would be for India to maintain its policy of non-alignment. Although India still claims it does not want to build an interdependence economically and militarily with outside, western powers, the Indian military forces have suffered as a result. Maintaining a policy of non-alignment likely will damage the Indian Navy further because without the Soviet Union as a reliable market for arms imports, the Indian Navy has no external source. Arguably, some European countries have sold ships to India, but India cannot afford to spend the money to continue purchasing these expensive commodities. Perhaps by abandoning the non-alignment policy, the United States could create favorable terms for the Indian Navy similar to those created by the Russians in the 1960's. As has been shown in the past, maintaining the current foreign policy will only prolong India's naval struggles.

Author Jed C. Snyder of the Institute for National Strategic Studies states that India's loss of its superpower benefactor and the demise of the non-aligned movement, has left India without its foreign policy anchors. India has thus found itself more dependent on the goodwill of the United States. In addition, New Delhi recognizes that

India's long-term power is dependent in large part upon economic growth and a closer relationship with the United States, and with Western economic institutions and investors.⁸⁰

VI. CONCLUSION

The question of this thesis was to determine whether the Indian Navy could expand significantly in the next twenty years in response to a growing Chinese fleet. By examining what factors were most influential in the history of Indian naval expansion, a pattern was discovered and applied to the existing condition of the Indian Navy to answer this question. Basically, India's reaction to perceived threat was the initial factor in all three naval expansion periods, combined with the foreign military aid package provided by the Soviet Union. Although economic factors were not influential in the first two expansion periods, economic factors were important in the third expansion period, which was the largest of the three periods in terms of defense expenditures and acquisitions. Therefore, it is concluded that a combination of response to perceived threat, some form of significant foreign military aid and a stable economy is necessary for India to experience a fourth naval expansion period similar to the magnitude of the first three periods.

As Walt stated, India in fact responded according to the balance of threat theory. Throughout India's history, a perceived threat from Pakistan or China existed prior to a naval expansion period. The threat was either in the form of direct conflicts or wars, or perceived capabilities and unclear intentions. By reviewing India's confrontational

history with Pakistan and China, adequate threat was consistently present to warrant an Indian military build-up. As the threat increased significantly, the Indian Navy expanded significantly in accordance with Walt's balance of threat theory.

Hewitt's and Ward's economic theory that countries will expand their military capabilities as their economies grow was valid in India's case during one of the three expansion periods. Although the first two periods did not correlate to an economically successful period for the Indian economy, it is important to note that India still managed to increase its defense budget. Since the third expansion period was the largest period in terms of defense expenditures and acquisitions, it is concluded that economic factors are becoming more important as military weapons and ship platforms become more expensive. Therefore, economic factors will be an important factor for India to experience a fourth naval expansion period.

Walt's foreign military aid theory is particularly enlightening in India's case. The favorable terms between the Soviets and the Indians were the most important factor in allowing India to expand its Navy. In compliance with the foreign military aid theory, the Soviets looked to increase their leverage over India to counter U.S. leverage over Pakistan. By the favorable terms with India, the Soviet Union felt India would be a potential ally in South

Asia. The Indians were smart to take advantage of the Soviet military link and consequently built a strong naval component, consisting primarily of Soviet-bought platforms and technology. However, the collapse of the Soviet Union significantly affected the capabilities of the Indian Navy which is now finding it difficult to locate spare parts and equipment to maintain its primarily Soviet-bought fleet. Nevertheless, the military aid package that the Soviets provided was perhaps the most important factor that helped drive Indian naval expansion.

The possible resumption of the United States selling arms to Pakistan provides an immediate threat to India. The U.S. arms package consists of twenty-eight F-16s, spare parts, P3C Orion planes, missiles, radars and anti-tank weaponry.⁸¹ The U.S. arms package gives Pakistan a capability that could threaten India's surface ships, oil terminals, and off-shore installations. Indian policy makers evaluate the U.S. arms package as enough of a threat to help India build up its military. According to retired Major General Vinod Saighal of the Indian Army, the U.S. arms package is what the Indian government needs to justify a significant military expansion. However, Saighal further explains that the lack of military experience within India's leadership likely will impede any significant military increases. Saighal claims that regardless of India's economic situation, the ability of the government to turn

the country's economic success into military expenditures is highly unlikely. Indian military leaders view the U.S. arms package as a direct threat to India's status in the region, but Indian government officials do not consider that threat as a priority that warrants significant increases in military expenditures.⁸²

Perhaps it is better reflected by India's Minister of State of Defense, Mr. Mallikarjun, who claims that "the resumption of arms supplies to Pakistan by the United States will have serious repercussions in the sub-continent."⁸³ At an Army commander's conference in New Dehli in October 1995, Mallikarjun stated that the U.S. arms package "will have serious implications and will accelerate the Indo-Pakistani arms race."⁸⁴ However, the ability of translating the increase in threat into an increase in military expenditures is highly unlikely due to the lack of military experience previously noted by Saighal.

In India's history, all three of the factors, perceived threat, economic success and foreign military aid, played a significant role in India's naval development. Those same factors likely will determine the Indian Navy's ability to expand a fourth time. No one factor can singlehandedly account for any naval expansion period. Although economic factors affected only one of three periods, the fact that weapons systems and ship types are becoming more expensive increases the importance of economic factors. As a result,

it is concluded that a combination of the three factors must be present for the Indian Navy to expand. As one would suspect, perceived threat is still present, as India still claims that Pakistan and China have the capabilities to counter India's regional hegemony. In the first half of the 1990s, India's economy is growing and it appears that India might sustain a level of economic growth conducive to expanding its military forces. The only factor not present in the 1990s is a foreign military package similar to the terms given by the Soviets. In fact, with the Soviets becoming an unreliable arms source, India's options have been narrowed significantly. The United States currently has frozen arms sales to both Pakistan and India, so India must look to Europe to purchase the latest surface and sub-surface technology. Another possible market would be with the Chinese, and since some normalization talks between China and India have taken place in the last two years, perhaps China is a possible future arms supplier for India.

India's main problem regardless of which country becomes the principle arms supplier, is the fact that all these countries are demanding hard currency. India can no longer expect to pay rupees for military equipment. Therefore, India's economic situation becomes even more important. In Ward's case studies of the East Asian NIC's, the economic success of these countries enabled them to purchase weapons in U.S. dollars. India would also have to

pay in hard currency, amplifying the significance of economic stability contributing to a fourth naval expansion period.

Another important point to address is India's indigenous ship building capability. Although India is producing some cruisers, destroyers and now submarines, the process is so slow that it does not equal the magnitude or criteria I used for a naval expansion period. The construction period in India could be anywhere from two to ten years for a few ships to be built much less the amount of ships that would equal a significant increase in naval capabilities. As analyzed by Sandy Gordon in *India's Rise to Power in the Twentieth Century and Beyond*, the Indian indigenous shipbuilding capability is weak. Of India's current fleet, Gordon agrees with Richard Sharpe, author of *Jane's Fighting Ships*, that the major combatants in India's inventory including aircraft carriers and the four Foxtrot Class submarines will be inactive by the year 2000. The projected numbers for the Indian fleet in the year 2000 are: one more aircraft carrier, two destroyers, two frigates, eight corvettes, one landing craft and two submarines. However, Gordon continues to say that of these projected ships, none of them are likely to be built by the year 2000. The only alternative to India is to purchase these platforms.⁸⁵

India's economic success has become very important. Perceived threat is almost taken for granted due to a combination of India's aspirations to be the regional hegemon and a tradition of rivalry between India and Pakistan, and between India and China. The key factor will be India's ability to transform their economic success into purchasing power by seeking favorable military options from new markets in Europe and in the CIS. All three hypotheses will contribute to India expanding its navy for a fourth time. First of all, by understanding that China and Pakistan are still threats, Indian naval planners will lobby for an increase in naval force structure. Secondly, with continued economic success, India can pay for the latest ship types and modern weaponry with hard currency. Finally, by actively seeking favorable contract terms with other countries, India can purchase these new ship platforms at a reasonable price to the Indian government and the supplying countries.

This thesis concludes that India will not experience a fourth naval expansion due to the lack of foreign military aid. In the 1990s, the only factor of the three tested in this thesis that is not present, is the foreign military aid package. As a result, the Indian Navy is in troubled waters, and will continue to struggle into the turn of the century. The basis for this argument is the fact that the strongest factor in the history of Indian naval development

was the favorable terms contracts that the Soviets shared with India. Without those terms, the Indian Navy would not have experienced the significant increases in naval force structure. An example of the effect of the Soviet military link is that seventy per cent of the Indian Navy consists of Soviet-built equipment. The Soviet military link began in the early 1960s just prior to the first naval expansion period and continued strong until the end of the third naval expansion period. When combined with perceived threat and economic success, the Soviet military link enabled India to purchase major ship platforms and technology pushing them into the category of a strong middle sized fleet.

Without some form of military aid or favorable terms, the Indian Navy will not expand. If the Indian Navy is to increase in force size and force structure in the next twenty years, India must alter its foreign policy and establish better relations with the United States and China in order to capitalize on the best military technology that these two countries can offer. However, it is very likely that both countries will require India to make certain concessions resembling a stronger alliance and interdependence than perhaps India is willing to make. It seems that currently India does not have an answer to the problem of their military arms supplier dilemma.

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